Unclassified **DSTI/SC(2017)2/FINAL**

Organisation de Coopération et de Développement Économiques
Organisation for Economic Co-operation and Development **07-Aug-2017**

English - Or. English

DIRECTORATE FOR SCIENCE, TECHNOLOGY AND INNOVATION
STEEL COMMITTEE

DSTI/SC(2017)2/FINAL
Unclassified

CAPACITY DEVELOPMENTS IN THE WORLD STEEL INDUSTRY

This document is the final version of the "Capacity Developments in the World Steel Industry", as declassified by delegates to the Steel Committee. It is also available on the OECD steel webiste at oe.cd/steel.

This document is only available in PDF format.

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JT03417872

Complete document available on OLIS in its original format

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FOREWORD

OECD Steel Committee delegates discussed a draft of this report at the Steel Committee meeting in March 2017. Delegates agreed to declassify the report following comments that have been reflected in the report. The report is made available on the Steel Committee website: http:/oe.cd/steel and is available on OLIS under the reference code: DSTI/SC(2017)2/FINAL.

Note for Israel
The statistical data for Israel are supplied by and under the responsibility of the relevant Israeli authorities. The use of such data by the OECD is without prejudice to the status of the Golan Heights, East Jerusalem and Israeli settlements in the West Bank under the terms of international law.

CAPACITY DEVELOPMENTS IN THE WORLD STEEL INDUSTRY

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ABSTRACT

The Secretariat of the OECD Steel Committee provides monitoring reports on crude steelmaking capacity developments on a regular basis, using a wide range of publicly available and commercial data sources. This paper presents an updated overview of regional capacity trends, including an assessment of gross capacity additions in the period until 2019. Following an increase in global steelmaking capacity to a level of 2 380.7 million tonnes in 2016, the analysis indicates that global capacity may continue to increase in the coming years, supported by new investment projects that are taking place particularly in regions such as the Middle East and in some Asian economies. The updated information on announced investment projects suggests that nearly 40 million tonnes of gross capacity additions are currently underway and could come on stream during the three-year period of 2017-19. An additional 53.6 million tonnes of capacity additions are currently in the planning stages for possible start-up during the same time period.

Keywords: Steel; Capacity

JEL Classification: L61

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1. Introduction

The Secretariat of the OECD Steel Committee provides monitoring reports on crude steelmaking capacity developments to members of the Committee on a regular basis. The last report was provided to delegates for discussion at the September 2016 meeting of the Steel Committee.

This paper presents an updated overview of recent steelmaking capacity developments taking place around the world, and provides an assessment of gross capacity additions in the period until 2019. The analysis also includes a brief summary, by region, identifying selected investment projects (including any postponements and cancellations of announced projects where applicable) and closures of capacity.

The information used to assess past capacity developments has been obtained from a wide range of publicly available and commercial data sources. The figures presented in this document are based on data available until December 2016. It should be noted, however, that developments have been evolving rapidly and that there are some uncertainties with respect to investment and, in particular, closure information. The OECD Steel Committee will continue working towards better transparency on steelmaking capacity developments.

2. Background: monitoring steelmaking capacity developments

The OECD began to monitor steelmaking capacity in the 1960s.[1] The importance of continuing this work and enhancing the dissemination of capacity data is accentuated by the fact that the World Steel Association no longer provides assessments of capacity developments to its members. The OECD can therefore play an important role as a provider of objective capacity data to policy makers and steel industry stakeholders.

As noted above, the OECD Secretariat collects data on steelmaking capacity from a wide range of publicly available and commercial data sources. These data sources include both capacity databases and specialised media reports. This information has been used to construct three internal databases related to steelmaking capacity, described below. This activity provides important information for policy makers and also supports the analytical work carried out by the OECD Secretariat.

2.1. Existing steelmaking capacity

The Secretariat regularly updates aggregate steelmaking capacity data at the economy-wide, regional and global levels. In the 1990s, the OECD began to publish a two-yearly publication covering the existing steelmaking plants of non-OECD economies, which includes information on the main steelmaking technologies of the plants (e.g. basic oxygen furnace or electric-arc furnace), the installed downstream equipment, ownership and other plant characteristics.[2] Country or regional aggregates are made available to the Steel Committee and information is sometimes published in declassified reports at oe.cd/steelcapacity. Changes in capacity over time are determined by new capacity additions net of permanent closures, described in more detail below. Table 1 below presents the Secretariat's nominal crude steelmaking capacity figures by economy and region in the ten-year period until 2016.

2.2. New capacity additions

In 2014, the OECD Secretariat started to compile a database of new investment projects taking place around the world, with a focus on announced iron and crude steelmaking projects. The database provides detailed information on installations, either underway or planned, of iron and crude steelmaking equipment by plant (e.g. DRI, BF, BOF and EAF), along with an array of other information related to the investment or plant, including the number of furnaces being installed, the associated total nominal capacity addition of the plant, the start-up year of the project, the ownership of the plant (public/private), and links to the public sources of information used to access the information.[3] Annex 1 provides a summary of the updated announced investment project database. In view of a recent request by the Steel Committee, the OECD Secretariat has also been collecting information on cancellations and postponements of the announced investment projects since January 2015. The information on investment projects is used to derive expectations about potential gross capacity additions in the current year as well as in future years.

2.3. Plant and capacity closures

At the OECD Steel Committee meeting in December 2014, delegates asked the Secretariat to start monitoring capacity closures. Work on a database of closures of steelmaking facilities began in 2015 and yielded its first outcomes in January 2016. Annex 2 presents updated data on closures accessed from public sources. There are challenges related to these data, particularly in distinguishing permanent from temporary closures (see Annex 3 for the working definition used) and in ensuring completeness of the information. The closure data are collected entirely from media sources and are provided at the equipment and plant-level, covering crude steel as well as upstream and downstream facilities that have been closed. Additional information is provided on plans to close down facilities. Data on lay-offs and the main steelmaking processes closed are also available for each closure registered in the database. Plant-level closure data compiled by the OECD Secretariat thus far have not been made publicly available, but have been incorporated into the calculations of existing capacity.[4]

3. Global summary of steelmaking capacity developments

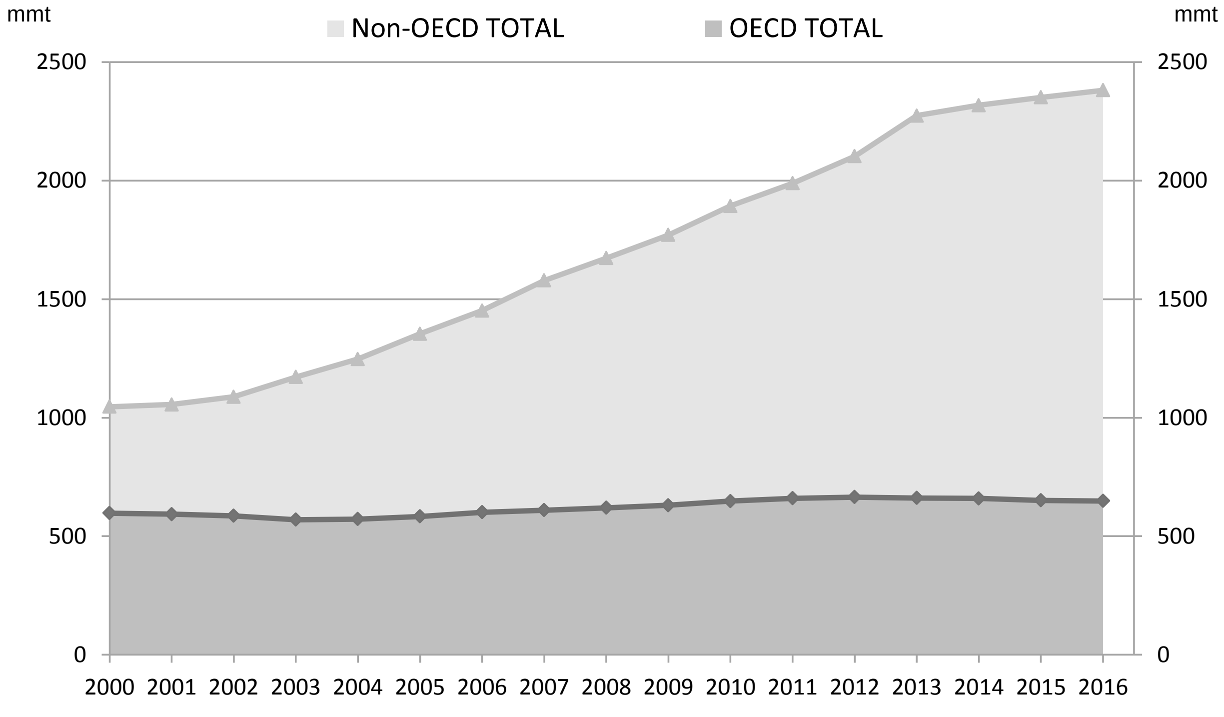
The global steel industry's capacity to produce steel has more than doubled since the start of the current century, from a level of 1.05 billion metric tonnes in 2000 to 2.39 billion tonnes in 2016. Global steel demand has increased rapidly until 2014, when it reached a record high level of 1.67 billion tonnes. Despite the decline in steel demand in 2015 to 1.62 billion tonnes, world steelmaking capacity continues to expand, albeit at a much slower rate than in the past.

World crude steelmaking capacity increased by 29.9 million tonnes per year (tpy) in 2016, to a level of 2 380.7 million tpy from 2 350.8 million tpy in 2015, representing an increase of 1.3%. This followed a 1.4% capacity increase registered in 2015. The build-up in steelmaking capacity has decelerated significantly since 2013; world capacity grew at an annual average rate of 1.5% in 2014-16, well below the 6.7% rate observed between 2011 and 2013 as well as during the first decade of the century (8.1%).

Even though global steel demand growth is still relatively weak, steelmaking capacity may continue to increase, supported by new investment projects that are taking place in various regions of the world. The updated information on announced investment projects suggests that nearly 40 mmt of gross capacity additions are currently underway and could come on stream during the three-year period of 2017-19, while an additional 54.5 mmt of capacity additions are currently in the planning stages for possible start-up during the same time period.

Figure 1. World crude steelmaking capacity

Millions of metric tonnes



Source: OECD Secretariat calculations

Table 1. Crude steelmaking capacity developments[5]

In million tonnes

	Nominal crude steelmaking capacity					
	2006	2012	2013	2014	2015	2016
Asia	784.16	1 347.24	1 513.41	1 554.52	1 585.68	1 608.53
Non-OECD Asia	599.05	1 135.88	1 296.18	1 337.55	1 369.71	1 392.56
Non-OECD Asia (excl.China, India)	54.58	79.46	85.96	89.55	92.91	102.21
Japan	128.70	131.00	131.20	131.10	130.51	130.51
Korea	56.42	80.36	86.03	85.87	85.47	85.47
China (People's Republic of)	488.47	959.92	1 106.22	1 140.00	1 162.30	1 164.55
Chinese Taipei	20.00	26.50	28.50	28.50	28.50	28.50
India	56.00	96.50	104.00	108.00	114.50	125.80
Pakistan	2.50	5.50	5.50	5.62	5.62	5.62
Indonesia	5.90	6.65	9.65	9.65	10.85	10.85
Malaysia	9.00	9.95	9.95	10.65	10.65	10.65
Philippines	1.80	2.00	2.00	2.00	2.80	3.40
Thailand	6.50	9.40	9.40	9.92	9.92	9.92
Viet Nam	1.50	9.40	10.90	11.95	12.45	21.15
Others_Asia	7.38	10.06	10.06	11.26	12.12	12.12
Bangladesh	0.15	2.50	2.50	3.70	4.56	4.56
Cambodia	0.00	0.00	0.00	0.00	0.00	0.00
Hong Kong (China)	0.00	0.00	0.00	0.00	0.00	0.00
Lao People's Democratic Republic	0.00	0.00	0.00	0.00	0.00	0.00
Mongolia	0.12	0.12	0.12	0.12	0.12	0.12
Myanmar	0.08	0.28	0.28	0.28	0.28	0.28
Nepal	0.26	0.26	0.26	0.26	0.26	0.26
Democratic People's Republic of Korea	6.00	6.00	6.00	6.00	6.00	6.00
Singapore	0.75	0.75	0.75	0.75	0.75	0.75
Sri Lanka	0.02	0.15	0.15	0.15	0.15	0.15
Developed Asia	205.12	237.86	245.73	245.47	244.48	244.48
ASEAN-6	25.45	38.15	42.65	44.92	47.42	56.72

	Nominal crude steelmaking capacity					
	2006	**2012**	**2013**	**2014**	**2015**	**2016**
CIS	132.20	144.35	145.75	147.30	147.80	150.65
Kazakhstan	6.00	8.15	8.15	8.15	8.15	8.15
Russia	76.00	84.20	88.60	89.60	90.10	91.45
Ukraine	45.00	45.50	42.50	42.50	42.50	42.50
Others	5.20	6.50	6.50	7.05	7.05	8.55
Azerbaijan	0.95	0.95	0.95	1.30	1.30	1.30
Belarus	1.50	2.80	2.80	3.00	3.00	4.50
Georgia	0.60	0.60	0.60	0.60	0.60	0.60
Moldova	1.00	1.00	1.00	1.00	1.00	1.00
Turkmenistan	0.15	0.15	0.15	0.15	0.15	0.15
Uzbekistan	1.00	1.00	1.00	1.00	1.00	1.00

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	Nominal crude steelmaking capacity					
	2006	2012	2013	2014	2015	2016
South America	53.00	66.09	66.81	66.81	69.58	73.78
Latin America	55.24	68.83	69.55	69.55	72.32	76.52
Non OECD Latin America	53.74	67.33	68.05	68.05	70.82	75.02
Argentina	5.80	6.65	6.65	6.65	6.65	7.30
Brazil	37.00	47.50	48.00	48.00	49.22	53.02
Chile	1.50	1.50	1.50	1.50	1.50	1.50
Colombia	1.20	2.20	2.20	2.20	2.20	2.20
Peru	1.10	1.45	1.45	1.45	1.45	1.20
Venezuela	6.00	6.20	6.20	6.20	7.75	7.75
Others	2.64	3.33	3.55	3.55	3.55	3.55
Bolivia	0.00	0.00	0.00	0.00	0.00	0.00
Costa Rica	0.00	0.00	0.00	0.00	0.00	0.00
Cuba	0.50	0.65	0.65	0.65	0.65	0.65
Dominican Republic	0.35	0.35	0.35	0.35	0.35	0.35
Ecuador	0.08	0.37	0.59	0.59	0.59	0.59
El salvador	0.15	0.25	0.25	0.25	0.25	0.25
Guatemala	0.25	0.35	0.35	0.35	0.35	0.35
Panama	0.00	0.00	0.00	0.00	0.00	0.00
Paraguay	0.15	0.15	0.15	0.15	0.15	0.15
Puerto rico	0.11	0.11	0.11	0.11	0.11	0.11
Trinidad and Tobago	1.00	1.00	1.00	1.00	1.00	1.00
Uruguay	0.05	0.10	0.10	0.10	0.10	0.10

Middle East	20.26	43.18	53.42	55.57	60.33	63.08
Non OECD Middle East	19.76	42.68	52.92	55.07	59.83	62.33
Iran	12.00	23.00	27.00	27.00	28.85	31.35
Iraq	0.35	0.35	1.72	1.72	1.72	1.72
Israel	0.50	0.50	0.50	0.50	0.50	0.75
Jordan	0.40	0.90	0.90	1.10	1.10	1.10
Qatar	1.50	2.00	2.00	3.10	3.70	3.70
Saudi Arabia	5.00	8.55	12.45	12.45	14.76	14.76
Syrian Arab Republic	0.10	2.70	2.70	2.70	2.70	2.70
United Arab Emirates	0.18	2.95	2.95	3.65	3.65	3.65
Others	0.23	2.23	3.20	3.35	3.35	3.35
Afghanistan	0.00	0.00	0.00	0.00	0.00	0.00
Bahrain	0.03	0.03	1.00	1.00	1.00	1.00
Kuwait	0.00	1.35	1.35	1.35	1.35	1.35
Lebanon	0.10	0.10	0.10	0.25	0.25	0.25
Oman	0.00	0.50	0.50	0.50	0.50	0.50
Yemen	0.10	0.25	0.25	0.25	0.25	0.25

	Nominal crude steelmaking capacity					
	2006	2012	2013	2014	2015	2016
Africa	27.91	30.80	33.20	33.85	35.03	35.29
Algeria	1.00	1.80	3.00	3.00	3.00	3.00
Egypt	8.00	9.30	10.50	11.15	12.33	12.33
Libya	1.30	1.60	1.60	1.60	1.60	1.60
Morocco	0.80	2.70	2.70	2.70	2.70	2.70
Nigeria	2.70	2.90	2.90	2.90	2.90	3.16
South Africa	12.30	10.30	10.30	10.30	10.30	10.30
Zimbabwe	1.01	1.10	1.10	1.10	1.10	1.10
Others	0.80	1.10	1.10	1.10	1.10	1.10
Congo	0.10	0.10	0.10	0.10	0.10	0.10
Côte d'Ivoire	0.00	0.00	0.00	0.00	0.00	0.00
Ethiopia	0.06	0.16	0.16	0.16	0.16	0.16
Ghana	0.19	0.19	0.19	0.19	0.19	0.19
Kenya	0.11	0.11	0.11	0.11	0.11	0.11
Mauritius	0.01	0.01	0.01	0.01	0.01	0.01
Mozambique	0.00	0.00	0.00	0.00	0.00	0.00
Sudan	0.08	0.08	0.08	0.08	0.08	0.08
Tanzania	0.00	0.00	0.00	0.00	0.00	0.00
Togo	0.00	0.00	0.00	0.00	0.00	0.00
Tunisia	0.10	0.20	0.20	0.20	0.20	0.20
Uganda	0.15	0.15	0.15	0.15	0.15	0.15
Zambia	0.00	0.10	0.10	0.10	0.10	0.10

Europe	268.44	297.84	291.14	289.34	283.34	278.34
OECD Europe	250.72	281.57	274.87	273.07	267.07	262.07
Non-OECD Europe	17.72	16.27	16.27	16.27	16.27	16.27
Other Europe	35.29	57.34	57.54	57.74	55.74	55.74
EU-28	233.15	240.50	233.60	231.60	227.60	222.60
Turkey	27.70	49.00	49.20	49.40	47.40	47.40
Norway	0.80	0.80	0.80	0.80	0.80	0.80
Switzerland	1.10	1.10	1.10	1.10	1.10	1.10
Bosnia and Herzegovina	1.95	1.95	1.95	1.95	1.95	1.95
Bulgaria	3.15	3.15	3.15	3.15	3.15	3.15
Croatia	0.18	0.53	0.53	0.53	0.53	0.53
Montenegro	0.37	0.37	0.37	0.37	0.37	0.37
Romania	8.70	6.15	6.15	6.15	6.15	6.15
Serbia	2.20	2.70	2.70	2.70	2.70	2.70
Others	1.17	1.42	1.42	1.42	1.42	1.42
Albania	0.65	0.90	0.90	0.90	0.90	0.90
Cyprus	0.00	0.00	0.00	0.00	0.00	0.00
Latvia	0.60	0.90	0.90	0.90	0.90	0.90
Former Yugoslav Republic of Macedonia	0.52	0.52	0.52	0.52	0.52	0.52

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	Nominal crude steelmaking capacity					
	2006	2012	2013	2014	2015	2016
NAFTA	154.50	161.00	158.00	158.20	157.22	159.17
United States	114.50	118.00	113.50	113.50	111.32	113.27
Canada	19.00	20.50	20.50	20.70	20.70	20.70
Mexico	21.00	22.50	24.00	24.00	25.20	25.20
Oceania	8.80	9.10	9.10	9.10	9.10	9.10
Australia	7.70	8.20	8.20	8.20	8.20	8.20
New Zealand	1.10	0.90	0.90	0.90	0.90	0.90
OECD TOTAL	601.13	665.03	661.20	659.34	651.37	648.57
Non-OECD TOTAL	850.38	1 437.31	1 612.37	1 658.09	1 699.46	1 732.12
WORLD TOTAL	1 451.51	2 102.34	2 273.57	2 317.43	2 350.83	2 380.69

[1]: The statistical data for Israel are supplied by and under the responsibility of the relevant Israeli authorities. The use of such data by the OECD is without prejudice to the status of the Golan Heights, East Jerusalem and Israeli settlements in the West Bank under the terms of international law.

[2]: Note by Turkey:
The information in this document with reference to “Cyprus” relates to the southern part of the Island. There is no single authority representing both Turkish and Greek Cypriot people on the Island. Turkey recognizes the Turkish Republic of Northern Cyprus (TRNC). Until a lasting and equitable solution is found within the context of United Nations, Turkey shall preserve its position concerning the “Cyprus” issue.
Note by all the European Union Member States of the OECD and the European Union:
The Republic of Cyprus is recognized by all members of the United Nations with the exception of Turkey. The information in this document relates to the area under the effective control of the Government of the Republic of Cyprus.

Source: OECD Secretariat

4. A review of regional capacity developments, closures, postponements and cancellations

The Middle East region is expected to experience a considerable increase in steelmaking capacity over the next few years, with more than 30 mmt of gross capacity additions currently underway or planned for start-up during 2017-19. Many capacity additions are also planned in Asia (34 mmt), where crude steelmaking capacity is expected to have increased to 1.61 billion tonnes in 2016, although less than 8 mmt of capacity projects are currently underway for completion in the next three years. The Commonwealth of Independent States (CIS) and Africa could see a slight increase in capacity, with around 4 mmt of gross additions currently underway in each region for the 2017-19 period. In the North American Free Trade Agreement (NAFTA) region, a 0.6 million tpy Electric Arc Furnace (EAF) capacity project is planned to be deployed during 2017. In contrast, no capacity additions are currently underway in Europe and Latin America, according to the updated investment data.

4.1 Middle East

Steelmaking capacity in the Middle East region is expected to grow rapidly in the next few years. In order to respond to demand in the region, investments are taking place in existing steelworks as well as in greenfield steelmaking facilities in the period until 2019. For example, the Iranian steelmaking company Chadormalu Mining & Industrial Co is expected to install a 1 million tpy EAF in Yazd province. In the meantime, there have also been some postponements of new capacity additions due to financial issues or shortages of natural gas supplies. Examples of these include Saudi Al-Yamamah Steel Industries, which has been postponing the construction of a 1 million tpy EAF since 2014, due to power connection issues. Most of the newly deployed equipment in the region uses EAF technology, reflecting natural endowments of natural gas used to produce direct reduced iron (DRI), which is subsequently transformed to steel in electric arc furnaces (EAF).

4.2 Asia

Although steelmaking capacity has increased rapidly in the People's Republic of China (hereafter 'China') in the past, the trend is now changing. Chinese steelmaking capacity is expected to have stabilised at 1.16 billion tpy in 2016, with some investments being offset by permanent closures. A target was set for reducing steelmaking capacity by 45 mmt in 2016 as part of the 100-150 mmt closure target set for the period until 2020. In early March 2017, however, there were indications that the annual targets had been exceeded. [6] These developments are being supported by a number of policies aimed at reducing steelmaking capacity.[7] As an example, Tonghua Iron & Steel Group and Changlong Iron & Steel has scrapped its EAF facilities in Jilin province, amounting to 1.08 million tpy of steelmaking capacity in total. In Anshan province, Anshan Baode Iron & Steel closed down 1.6 million tpy of steelmaking capacity, also in 2016. There are currently no investments underway in China, though a total of 5 mmt of capacity projects are in the planning stage, according to the updated investment data.

Steelmaking capacity in India has been expanding at a fast rate in recent years reaching 125.8 million tpy in 2016, up from 56 million tonnes ten years earlier. Most of the capacity additions in India are brownfield projects, expanding already existing steelmaking facilities. However, the rate of capacity growth is expected to slow in the period until 2019. While there are a number of investment projects underway, including a BOF shop in Odisha district with 2.5 million tpy of capacity currently planned to be operational in 2017, rising imports and lower steel consumption growth has led to the postponement of some greenfield projects. For example, TATA's plan to build a BF and a BOF in Kalinganagar with the capacity to produce 3 million tpy, and initially foreseen to become operational in 2016, has been postponed.

The Association of Southeast Asian Nations (ASEAN) region is expected to see only a slight increase in steelmaking capacity from a level of 56.7 million tpy in 2016. One greenfield project is expected to become operational in 2017 in Indonesia, to meet demand from the country's growing construction sector. The Gunung Steel Group is installing a 0.5 million tpy EAF in north Sumatra, which is expected to become operational in 2017.

4.3 CIS

In the Commonwealth of Independent States (CIS) region, some projects to build EAF as well as BOF facilities are currently underway. For instance, Russian steelmaker Tulachermet is installing a 1.8 million tpy BOF in the Central Federal District, which is expected to be operational in 2017. In addition, mini-mill projects to produce long products are underway to meet steel demand from the construction sector. Russian MERA-Stal is constructing a 0.35 million tpy mini-mill for the production of rebar near St. Petersburg, foreseen to start operations in 2017. A total of 11.9 mmt of gross capacity additions are either underway or planned for completion in the 2017-19 period in the CIS region, which may raise the region's crude steelmaking capacity somewhat from its 2016 level of 150.7 million tpy.

4.4 Africa

In Africa, there are some investment projects planned or already underway, aimed at increasing domestically-produced steel for use in developing the region's infrastructure. Overall, the region’s steelmaking capacity is expected to grow from a level of 35.3 million tpy in 2016, with new investments foreseen mainly in North African economies. For example, in Algeria Tosyaly is investing in a new EAF plant with the capacity to produce 2.3 million tpy, with a view to starting operations by 2017. However, energy supply issues have been hampering the implementation of some investment projects. For example, Jordan’s Taybah Steel has postponed the launch of new 0.45 million tpy EAF plant in Egypt due to a lack of power connection since 2014.

4.5 NAFTA

In the NAFTA region, an addition of 0.6 million tpy of EAF steelmaking capacity is expected to be deployed in Mexico's Chihuahua region in 2017, as a result of an investment project by Industrias CH. A number of closures have taken place during 2016, including a downstream tube mill in Texas, United States, amounting to 0.7 million tpy of capacity. Crude steelmaking capacity in the NAFTA region is expected to have stood at a level of 159.2 million tpy in 2016.

Table 2. Potential gross capacity additions in 2017-19

Unit: million tonnes

	Existing nominal capacity		% change	Potential gross capacity additions in 2017-19	
	2016	2015	2016	Underway	Planned
Asia	1608.53	1585.68	1.4%	7.82	33.95
CIS	150.65	147.80	1.9%	4.21	7.65
Latin America	76.52	72.32	5.8%	0.00	0.00
Middle East	63.08	60.33	4.6%	23.06	7.25
Africa	35.29	35.03	0.7%	3.98	3.40
Europe	278.34	283.34	-1.8%	0.00	2.27
NAFTA	159.17	157.22	1.2%	0.60	0.00
Oceania	9.10	9.10	0.0%	0.00	0.00
OECD Total	648.57	651.37	-0.4%	0.60	2.27
Non-OECD Total	1732.12	1699.46	1.9%	39.07	52.25
World Total	2380.69	2350.83	1.3%	39.67	54.52

Notes: CIS denotes the Commonwealth of Independent States, ASEAN-6 denotes the aggregate of Indonesia, Malaysia, Philippines, Singapore, Thailand and Viet Nam.

Source: OECD Secretariat calculations.

4.6 Other regions

There are no capacity additions underway in the European Union. There have been many closures in recent years, affecting crude steelmaking facilities as well as downstream and upstream operations. With regard to OECD Member economies located in “Other Europe”, i.e. Norway, Switzerland and Turkey, there are no steelmaking capacity investment projects underway. A previously foreseen EAF capacity investment project that was underway, amounting to 0.5 million tpy in Turkey (Corbus Celik's plant in Hatay province), has been suspended since 2015. In addition to the suspension of this project, three investment projects which planned to install two BOFs (Icdas’s plant in Biga province and Kardemir’s plant in Zonguldak province) and an EAF (Yolbulan Bastug’s plant in Osmaniye province), amounting to a total 10 million tpy of capacity, have been cancelled. In Europe as a whole, nominal crude steelmaking capacity declined by several million tonnes in 2016 to 278.3 million tpy.

In Latin America and Oceania there are neither steelmaking capacity additions underway, nor were permanent closures observed during 2016 from the publicly available sources used to update the OECD's monitoring databases.

ANNEX 1: PLANT-LEVEL INVESTMENTS

Table 3 summarises the plant level database providing the developments in underway or planned steelmaking capacity investment projects up to 2019. Annex 2 provides information on steelmaking capacity closures (permanent or temporary), which took place between January and December 2016, according to publicly available information. Since the status of the each project and information on closures is changing rapidly, the Secretariat would welcome any corrections from Steel Committee delegates to the information provided in these tables.

Table 3. Investment data

Announced investments, postponements and cancellations by steel plants, 2017-2019

REGION	ECONOMIES	LOCATION	COMPANY	EQUIPMENT	NUMBER OF EQUIPMENT	CAPACITY	STATUS	START	SOURCES
Africa	Algeria	Bellara, Jijel	Algerian Qatari Solb Company	EAF	x 1	2000	plan	2019	World Steel Capacities
Africa	Algeria	El Hadjar, Annaba	IMETAL	BOF	x 1	350	plan	2017	Metal Expert
Africa	Algeria	El Hadjar, Annaba	IMETAL	EAF	x 1	1200	plan	2017	Press release
Africa	Algeria	Bethioua	Tosyali	EAF	x 1	2300	underway	2017	World Steel Capacities
Africa	Algeria	Annaba	Emarat Dzayer Steel Company	EAF	x 1	800	plan	2017	Metal Expert
Africa	Algeria	n/a	Lamino Group Attia	EAF	x 1	600	plan	n/a	World Steel Capacities
Africa	Egypt	Al Ain Al Sokhna	Egyptian Steel Group	EAF	x 1	830	underway	2017	Platts
Africa	Egypt	Sokhna, Suez	Ezz Steel	EAF	x 1	850	underway	2019	Platts
Africa	Nigeria	Ajaokuta Steel Complex, Kogi	Global Steel Holding Ltd.	BOF	x 2	2600	plan	2018	World Steel Dynamics
Africa	Tunisia	Menzel Bourguiba	El-Fouladh	EAF	x 1	700	plan	n/a	Platts
Africa	Egypt	Al Mansoura, Dakahlia	Taybah Steel	EAF	x 1	450	postponement	n/a	Platts
Africa	Ethiopia	Addis Ababa	Metal & Engineering Corp	EAF	x 1	300	postponement	n/a	World Steel Dynamics
Asia	Bangladesh	n/a	GPH Ispat Ltd	EAF	x 1	815	underway	2018	World Steel Capacities
Asia	China	Rizhao, Shandong	Shandong Iron & Steel Rizhao	BOF	x 2	5000	plan	2017	Metal Expert
Asia	India	Angul, Odisha	Jindal Steel and Power Limited (JSPL)	BOF	x 1	2500	underway	2017	Platts
Asia	India	Angul, Odisha	Jindal Steel and Power Limited (JSPL)	BOF	x 1	3000	plan	2017	Metal Expert
Asia	India	Ballari	Sesa Sterlite	n/a	n/a	4000	underway	n/a	Metal Expert
Asia	India	Dilmili, Chhattisgarh	NMDC	BOF	x 2	3000	plan	2017	Metal Expert
Asia	India	Duburi, Odisha	Neelachal Ispat Nigam (NINL)	BOF	x 1	n/a	plan	n/a	World Steel Capacities
Asia	India	Paradip	Essar Steel	BOF	x 1	6000	plan	2018	World Steel Capacities
Asia	India	Panjim	Shree Uttam Steel and Power Ltd	BOF	x 1	1550	plan	2019	World Steel Capacities
Asia	India	n/a	Shree Uttam Steel and Power Ltd	BOF	x 1	1550	plan	2019	World Steel Capacities
Asia	India	Panjim	Shree Uttam Steel and Power Ltd	BOF	x 1	1550	plan	n/a	World Steel Capacities
Asia	India	Panjim	Shree Uttam Steel and Power Ltd	BOF	x 1	1550	plan	n/a	World Steel Capacities
Asia	India	Gujarat	Welspun Group	BOF	x 2	3000	plan	2018	World Steel Capacities
Asia	India	Gujarat	Welspun Group	BOF	x 2	3000	plan	2018	World Steel Capacities
Asia	India	Jamshedpur, Jharkhand	Tata Steel	BOF	x 1	1300	plan	n/a	Platts
Asia	India	Kalinganagar	Mideast Integrated Steel (Mesco Steel)	BOF	x 1	1200	plan	2019	Metal Expert
Asia	India	Kalinganagar	Mideast Integrated Steel (Mesco Steel)	BOF	x 1	1150	plan	2019	Metal Expert
Asia	India	Kalinganagar	Mideast Integrated Steel (Mesco Steel)	BOF	x 1	1150	plan	2019	Metal Expert
Asia	India	Kalinganagar, Odisha	Tata Steel	BOF	x 1	3000	plan	n/a	World Steel Capacities
Asia	India	Kalinganagar	Tata Steel	BOF	x 1	3000	underway	2017	Metal Experts
Asia	India	Marakuta	MSP Metallics Ltd	IF	x 4	240	plan	n/a	World Steel Capacities
Asia	India	Salboni, West Bengal	JSW Steel	BOF	x 2	3000	plan	n/a	Metal Expert
Asia	India	Vijayanagar, Karnataka	JSW Steel	BOF	x 1	2000	plan	2017	Metal Expert
Asia	India	Visakhapatnam, Andhra-Pradesh	Rashtriya Ispat Nigam Ltd (RINL)	BOF	x 1	1000	underway	2017	Metal Expert
Asia	India	Kalinganagar	Tata Steel	BOF	x 1	3000	plan	2017	Metal Expert
Asia	India	Karnataka	NMDC	BOF	x 2	3000	plan	2017	World Steel Capacities
Asia	Indonesia	East Java	Wuhan Iron & Steel (Wugang)	EAF	x 1	5000	plan	n/a	Platts
Asia	Indonesia	North Sumatra	Gunung Gahapi Sakti (GGS)	EAF	x 1	500	underway	2017	Platts
Asia	Indonesia	North Sumatra	Gunung Gahapi Sakti (GGS)	EAF	x 1	500	plan	2017	Platts
Asia	Malaysia	Sarawak State	Hebei Xinwuan Steel Group	BOF	x 1	5000	plan	n/a	Metal Expert
Asia	Pakistan	Taybah Steel	Taybah Steel	EAF	x 1	n/a	plan	n/a	Metal Expert
Asia	Pakistan	n/a	Taybah Steel Group	EAF	x 1	500	plan	n/a	World Steel Capacities
Asia	Pakistan	n/a	Taybah Steel Group	EAF	x 1	500	plan	n/a	World Steel Capacities
Asia	Pakistan	n/a	Indus Consortium Mining & Steel Industry	BOF	x 1	500	plan	n/a	World Steel Capacities
Asia	Pakistan	n/a	Indus Consortium Mining & Steel Industry	BOF	x 1	500	plan	n/a	World Steel Capacities
Asia	Philippines	Davao	SteelAsia Manufacturing Corporation	EAF	n/a	n/a	plan	n/a	World Steel Capacities
Asia	Thailand	Rayong	Tycoons Worldwide Group	EAF	x 2	520	operating	n/a	Metal Expert
Asia	Viet Nam	Haiphong	Australia Steel Billet Co	EAF	n/a	750	plan	n/a	Metal Expert
Asia	Viet Nam	Lao Cai	Vietnam Steel Corporation (VSC)	BOF	x 1	500	plan	n/a	Platts
Asia	Viet Nam	Lao Cai	Lao Cai Cast Iron and Steel Plant	BOF	x 1	500	plan	n/a	World Steel Capacities
Asia	Viet Nam	Lao Cai	Lao Cai Cast Iron and Steel Plant	EAF	x 1	600	plan	n/a	World Steel Capacities
Asia	Viet Nam	Ninh Binh	Kyoei Steel Vietnam Company	EAF	x 1	300	plan	n/a	Platts
Asia	Viet Nam	n/a	Vietnam-Japan Steel (Vija)	EAF	x 1	n/a	plan	2017	World Steel Capacities
Asia	India	Kalinganagar	Tata Steel	BOF	x 1	3000	postponement	n/a	Metal Experts
Asia	Viet Nam	Haiphong	Australia Steel Billet Co	EAF	n/a	750	postponement	n/a	Metal Expert
Asia	Viet Nam	Ninh Binh	Kyoei Steel Vietnam Company	EAF	x 1	300	postponement	n/a	Platts

CAPACITY DEVELOPMENTS IN THE WORLD STEEL INDUSTRY

REGION	ECONOMIES	LOCATION	COMPANY	EQUIPMENT	NUMBER OF EQUIPMENT	CAPACITY	STATUS	START	SOURCES
CIS	Georgia	Rustavi	Georgian Steel	EAF	x 1	180	plan	n/a	Platts
CIS	Russian Federation		Belstal	BOF	x 1	n/a	plan	2018	World Steel Capacities
CIS	Russian Federation		Belstal	BOF	x 1	n/a	plan	2018	World Steel Capacities
CIS	Russian Federation	Bratsk, Siberian Federal District	East Siberian Metallurgical Co	EAF	x 1	270	plan	2018	Metal Expert
CIS	Russian Federation		Khabarovsk	BOF	x 1	500	plan	2018	World Steel Capacities
CIS	Russian Federation		Khabarovsk	BOF	x 1	n/a	plan	n/a	World Steel Capacities
CIS	Russian Federation	Kirov	Kirov Metallurgical Zavod	EAF	x 1	372	underway	2018	World Steel Capacities
CIS	Russian Federation	Chelyabinsk	Zlatoust Steel Plant	EAF	x 1	700	plan	n/a	Ministry of Industry and Trade
CIS	Russian Federation	Chusovoy, Volga Federal District	United Metallurgical (OMK)	EAF	x 1	900	plan	2018	Ministry of Industry and Trade
CIS	Russian Federation	Gubkin, Central Federal District	Metalloinvest	BOF	x 1	3000	plan	2017	Press release
CIS	Russian Federation		Metal and Innovations	EAF	x 1	350	underway	2019	World Steel Capacities
CIS	Russian Federation	Hrombur	Hrombur	EAF	x 1	500	plan	n/a	Metal Expert
CIS	Russian Federation	Ishimbai	Ishstal plant	EAF	x 1	300	underway	2017	World Steel Capacities
CIS	Russian Federation	Ivanovo	Kineshemsky metallurgical plant	EAF	x 1	40	plan	2017	Metal Expert
CIS	Russian Federation	Ivanovo	Kineshemsky metallurgical plant	EAF	x 1	40	plan	2017	Metal Expert
CIS	Russian Federation	Ivanovo	Kineshemsky metallurgical plant	EAF	x 1	40	plan	2017	Metal Expert
CIS	Russian Federation	Izberbash, Dagestan	Dagestan Electrothermal Equipment Plant	EAF	x 1	100	plan	n/a	Metal Expert
CIS	Russian Federation	Khabarovsk	Torex	EAF	x 1	240	underway	2017	World Steel Capacities
CIS	Russian Federation	Kirovsky	Kirovsky Steel Works	EAF	x 1	350	underway	2017	Metal Expert
CIS	Russian Federation	Kirov	KirovMetZavod	EAF	x 1	330	plan	2018	Metal Expert
CIS	Russian Federation	Kolpino, Northwestern Federal District	Mera-Stal	EAF	x 1	350	underway	2017	Metal Expert
CIS	Russian Federation	Krasnoyarsk	Krasny Yar AO	EAF	n/a	200	plan	n/a	Metal Expert
CIS	Russian Federation	Murmansk	Monchegorsk Mechanical Engineering Plant	EAF	n/a	135	plan	2017	Metal Expert
CIS	Russian Federation	Rostov, Southern Federal District	Don-Metall	EAF	x 1	160	underway	2017	Metal Expert
CIS	Russian Federation	Rostov, Southern Federal District	DonElectroStal	EAF	x 1	285	underway	2017	Ministry of Industry and Trade
CIS	Russian Federation	Tatarstan	Maxi-Invest investment company	EAF	x 1	1200	plan	n/a	Metal Expert
CIS	Russian Federation	Tula, Central Federal District	Tulachermet	BOF	x 1	1800	underway	2017	Metal Expert
CIS	Russian Federation	Tula, Central Federal District	Tulachermet	BOF	x 1	1870	plan	2018	Metal Expert
CIS	Russian Federation	Volgotsemmash	Volgotsemmash	EAF	n/a	500	plan	n/a	Metal Expert
CIS	Russian Federation	Magnitogorsk	Magnitogorsk Iron & Steel Works	BOF	x 1	3200	plan	2017	World Steel Capacities
CIS	Tajikistan	Gissar Steel Works	Gissar Steel Works	EAF	n/a	150	plan	n/a	Metal Expert
CIS	Kyrgyztan	n/a	Kyrgyz Metall	EAF	x 1	120	plan	2017	World Steel Capacities
CIS	Ukraine	Dzerzhinsky	Donetsksteel	BOF	x 1	2000	plan	n/a	World Steel Capacities
CIS	Georgia	Rustavi	Georgian Steel	EAF	x 1	180	postponement	n/a	Platts
CIS	Russian Federation	Krasnoyarsk	Krasny Yar AO	EAF	n/a	200	postponement	n/a	Metal Expert
CIS	Russian Federation	Volgotsemmash	Volgotsemmash	EAF	n/a	500	postponement	n/a	Metal Expert
CIS	Ukraine	Donetsk	Donetsk Iron & Steel Works (DMZ)	EAF	x 1	1500	postponement	n/a	Platts
Europe	Germany	Duisburg	Thyssenkrupp Steel Europe AG	BOF	x 1	n/a	plan	2017	Metal Expert
Europe	Germany	Duisburg	ArcelorMittal	BOF	x 1	n/a	plan	2017	World Steel Capacities
Europe	Germany	Badische Stahlwerke GmbH	Badische Stahlwerke GmbH	EAF	x 2	400	plan	n/a	World Steel Capacities
Europe	Germany	Flachstahl	Salzgitter AG	BOF	x 1	n/a	plan	2017	World Steel Capacities
Europe	Italy	Acciaieria	Arvedi	EAF	x 1	1570	plan	2017	World Steel Capacities
Europe	Italy	n/a	Aferpi	EAF	x 1	1000	plan	2018	World Steel Capacities
Europe	Italy	n/a	Aferpi	EAF	x 1	n/a	plan	2018	World Steel Capacities
Europe	Italy	n/a	Aferpi	EAF	x 1	1000	plan	2019	World Steel Capacities
Europe	Scotland	n/a	Liberty House Group	EAF	x 1	n/a	plan	n/a	Metal Expert
Latin America	Bolivia	El Mutún, Santa Cruz	Empresa Siderurgica del Mutun	EAF	x 1	150	plan	2018	World Steel Capacities
Latin America	Brazil	Acailandia	Gusa Nordeste	BOF	x 1	600	plan	n/a	Metal Expert
Latin America	Brazil	Primavera, Ceará	Siderúrgica Latino Americana (Silat)	EAF	x 1	1200	plan	2017	Platts
Latin America	Ecuador	Jv with Sinosteel	State-owned flat steel mill	n/a	n/a	n/a	plan	n/a	Platts
Latin America	Ecuador	Porsorja	EP Petroecuador	EAF	x 1	1000	plan	n/a	World Steel Capacities
Latin America	Peru	Pisco	Aceros Arequipa	EAF	x 1	650	plan	2018	Platts
Latin America	Peru	Pisco	Aceros Arequipa	EAF	x 1	n/a	plan	n/a	World Steel Capacities
Latin America	Venezuela	Ciudad Ojeda, Zulia	Gerdau Sizuca	EAF	x 1	60	plan	n/a	Metal Expert
Latin America	Venezuela	Ciudad Piar, Bolivar	Siderurgica Nacional	EAF	x 1	n/a	plan	n/a	Metal Expert
Middle East	Iran	n/a	Azna Steel	EAF	x 1	700	underway	n/a	World Steel Capacities
Middle East	Iran	Abarkuh, Yazd, Sarmad Abarkuh	Arfa Iron & Steel Co	EAF	x 1	600	underway	2020	Metal Expert
Middle East	Iran	Ahwaz	Khouzestan Steel Company (KSC)	EAF	x 6	1400	plan	2018	Platts
Middle East	Iran	Yazd	Chadormalu Mining & Industrial Co	EAF	x 1	1000	underway	2017	Metal Expert
Middle East	Iran	Azerbaijan	Eight mini steelworks (Mianeh Steel)	EAF	x 1	800	plan	2018	Platts
Middle East	Iran	Qaenat Steel Complex	IMIDRO	EAF	x 1	800	underway	2018	World Steel Capacities
Middle East	Iran	Macran Steel Complex	IMIDRO	EAF	x 1	3200	plan	n/a	World Steel Capacities
Middle East	Iran	Bandar Abbas	Kish South Kaveh Steel	EAF	x 1	1200	underway	2017	Platts
Middle East	Iran	Bandar Abbas, Hormozgan	Persian Gulf Saba Steel	EAF	x 1	1500	plan	n/a	World Steel Capacities
Middle East	Iran	Bandar Abbas, Hormozgan	Persian Gulf Saba Steel	EAF	x 1	1500	plan	n/a	World Steel Capacities
Middle East	Iran	Bandar Abbas, Hormozgan	Persian Gulf Saba Steel	EAF	x 1	1500	plan	n/a	World Steel Capacities
Middle East	Iran	Bakhtiari	Mobarakeh Steel	EAF	x 1	1000	plan	2017	Metal Expert
Middle East	Iran	Bakhtiari	Mobarakeh Steel	EAF	x 1	1000	plan	n/a	World Steel Capacities

CAPACITY DEVELOPMENTS IN THE WORLD STEEL INDUSTRY

REGION	ECONOMIES	LOCATION	COMPANY	EQUIPMENT	NUMBER OF EQUIPMENT	CAPACITY	STATUS	START	SOURCES
Middle East	Iran	Butia Steel Company (BISCO)	Butia Steel Company	EAF	x 1	1500	underway	2018	Metal Expert
Middle East	Iran	n/a	Bafgh Mineral Complex Iron and Steel Industry Company (B-MISCO)	EAF	x 1	800	plan	2018	World Steel Capacities
Middle East	Iran	C. KHORASAN, Torbat Heydariyeh)	National Iranian Steel Company	EAF	x 1	800	underway	2017	Metal Expert
Middle East	Iran	Torbat Heydariyeh	Torbat Heydariyeh Steel	EAF	x 1	1450	plan	n/a	World Steel Capacities
Middle East	Iran	Torbat Heydariyeh	Torbat Heydariyeh Steel	EAF	x 1	1450	plan	n/a	World Steel Capacities
Middle East	Iran	Chaharmahal Bakhtiari	Eight mini steelworks (Sefid Dasht Steel)	EAF	x 1	800	plan	n/a	Platts
Middle East	Iran	Esfahan	Esfahan Steel	EAF	x 1	1650	plan	n/a	World Steel Capacities
Middle East	Iran	Esfahan	Natanz Steel Industries	EAF	x 1	850	underway	2017	World Steel Capacities
Middle East	Iran	Fars	Eghlid Steel	EAF	x 1	1500	underway	2018	irsteel.com
Middle East	Iran	Fars	Eight mini steelworks (Neyriz Steel)	EAF	x 1	800	plan	n/a	Metal Bulletin
Middle East	Iran	Gilan	Amirkabir Steel	EAF	x 1	500	underway	2017	Metal Expert
Middle East	Iran	Kerman	Eight mini steelworks (Baft Steel)	EAF	x 1	800	plan	n/a	Platts
Middle East	Iran	Khorasan	Eight mini steelworks (Sabzevar Steel)	EAF	x 1	800	underway	2018	Platts
Middle East	Iran	Khouzestan	Eight mini steelworks (Shadegan Steel)	EAF	x 1	1000	plan	2017	Platts
Middle East	Iran	Shadegan Steel Complex	Khouzestan	EAF	x 1	1300	plan	n/a	World Steel Capacities
Middle East	Iran	Shadegan Steel Complex	Khouzestan	EAF	x 1	1300	plan	n/a	World Steel Capacities
Middle East	Iran	Shadegan Steel Complex	Khouzestan	EAF	x 1	1250	plan	n/a	World Steel Capacities
Middle East	Iran	Shadegan Steel Complex	Khouzestan	EAF	x 1	1250	plan	n/a	World Steel Capacities
Middle East	Iran	Shadegan Steel Complex	Khouzestan	EAF	x 1	n/a	plan	n/a	World Steel Capacities
Middle East	Iran	Shadegan Steel Complex	Khouzestan	EAF	x 1	n/a	plan	n/a	World Steel Capacities
Middle East	Iran	Shadegan Steel Complex	Khouzestan	EAF	x 1	1250	plan	n/a	World Steel Capacities
Middle East	Iran	Shadegan Steel Complex	Khouzestan	EAF	x 1	1250	plan	n/a	World Steel Capacities
Middle East	Iran	Shadegan Steel Complex	Khouzestan	EAF	x 1	n/a	plan	n/a	World Steel Capacities
Middle East	Iran	Shadegan Steel Complex	Khouzestan	EAF	x 1	n/a	plan	n/a	World Steel Capacities
Middle East	Iran	Khuzestan	Arvand Jahanara Steel Company	EAF	x 1	1200	plan	2018	Metal Expert
Middle East	Iran	Khuzestan	Arvand Jahanara Steel Company	EAF	x 1	1200	plan	n/a	World Steel Capacities
Middle East	Iran	Mobarakeh Steel	Mobarakeh Steel	EAF	x 1	850	underway	2017	Metal Expert
Middle East	Iran	Mobarakeh Steel	Mobarakeh Steel	EAF	x 1	1500	underway	2017	World Steel Capacities
Middle East	Iran	n/a	North West Steel Industries (NWSI)	EAF	x 1	800	plan	n/a	World Steel Capacities
Middle East	Iran	Qheshm island, Hormozgan	IMIDRO	EAF	x 1	1500	plan	2021	Platts
Middle East	Iran	Qheshm island, Hormozgan	IMIDRO	EAF	x 1	1500	plan	2023	World Steel Capacities
Middle East	Iran	Saeb Steel Complex	Saeb Steel Complex	EAF	x 1	550	underway	2017	Metal Expert
Middle East	Iran	Samangan Steel Industries	Samangan Steel Industries	EAF	x 1	750	plan	n/a	Metal Expert
Middle East	Iran	Samangan Steel Industries	Samangan Steel Industries	EAF	x 1	750	plan	n/a	Metal Expert
Middle East	Iran	Shiraz	Fasa Steel Complex Co (Fasco)	EAF	x 1	1500	underway	2017	Yieh.com
Middle East	Iran	Bardsir	Bardsir Sponge Iron and Steel Plant - Bardsir Steel Making Plant	EAF	x 1	1000	underway	2017	World Steel Capacities
Middle East	Iran	Golgohar	Golgohar Mining & Industrial Co.	EAF	x 1	1500	plan	2018	World Steel Capacities
Middle East	Iran	Golgohar	Golgohar Mining & Industrial Co.	EAF	x 1	1500	plan	n/a	World Steel Capacities
Middle East	Iran	Golgohar	Golgohar Mining & Industrial Co.	EAF	x 1	1000	underway	n/a	World Steel Capacities
Middle East	Iran	Golgohar	Golgohar Mining & Industrial Co.	EAF	x 1	1000	plan	n/a	World Steel Capacities
Middle East	Iran	Sistan and Baluchestan	IMIDRO	EAF	x 1	3200	plan	n/a	Metal Expert
Middle East	Iran	n/a	Foolad Kavir	EAF	x 1	500	plan	n/a	Metal Expert
Middle East	Iran	Zarand Iron & Steel Company (ZISCO)	Zarand Iron & Steel Company (ZISCO)	BOF	x 1	1700	underway	2017	Metal Expert
Middle East	Iran	Bonab	Bonab Steel Complex	EAF	x 1	1500	underway	2017	World Steel Capacities
Middle East	Iran	n/a	Bistoun Steel	EAF	x 1	400	underway	2017	World Steel Capacities
Middle East	Iran	Sadrfoulad	Sadrfoulad Complex	EAF	x 1	400	underway	2017	World Steel Capacities
Middle East	Iran	Tehran	West Alborz Steel Co.	EAF	x 1	1000	plan	n/a	World Steel Capacities
Middle East	Iran	Yazd	Iran Alloy Steel Company	EAF	x 1	700	underway	2018	Metal Expert
Middle East	Iran	Zonouz (Shams Iron & Steel Complex)	Daric Investment Group	EAF	x 1	1500	plan	n/a	World Steel Capacities
Middle East	Iran	n/a	Pars Kohan Diar Parsian Steel (PKP)	EAF	x 1	1600	plan	2018	World Steel Capacities
Middle East	Iran	n/a	Shahrood Steel Co	EAF	x 1	300	underway	n/a	World Steel Capacities
Middle East	Iran	n/a	Shahrood Steel Co	EAF	x 1	400	underway	2017	World Steel Capacities
Middle East	Iraq	Basra	Al Moussawi Trading	EAF	n/a	500	plan	n/a	Platts
Middle East	Iraq	Sulaymaniyah, Kurdistan	Mass Group Holding	EAF	x 1	250	plan	n/a	Metal Expert
Middle East	Iraq	Taji	Al-Sumood Company for Steel Industries	EAF	x 2	150	plan	n/a	Platts
Middle East	Oman	Muscat Steel	Muscat Steel	EAF	x 1	200	plan	n/a	Metal Expert
Middle East	Oman	Sohar	Moon Iron & Steel (MISCO)	EAF	x 1	1200	underway	2018	Platts
Middle East	Oman	Sur	Sun Metals	EAF	x 2	2400	plan	2018	Platts
Middle East	Saudi Arabia	Dammam	Al-Qaryan Steel Company	EAF	x 1	300	plan	n/a	Metal Expert
Middle East	Saudi Arabia	Jeddah	Arkan Steel	EAF	x 1	600	plan	2017	World Steel Capacities
Middle East	Saudi Arabia	Hijaz	Factory Rabigh Steel Industry	EAF	x 1	n/a	plan	2017	World Steel Capacities
Middle East	Saudi Arabia	Ras Al-Khair	Gulf Tubing Co	EAF	x 1	600	plan	2019	Platts
Middle East	Saudi Arabia	Watani Steel II, Riyadh	Taybah Steel	EAF	x 1	1500	underway	2018	Platts
Middle East	Saudi Arabia	Yanbu, Medina	Atoun Steel Industry	EAF	x 1	910	underway	2017	Platts
Middle East	Saudi Arabia	Jizan	Al-Yamamah Steel Industries	EAF	x 1	1000	postponement	n/a	Platts
NAFTA	Mexico	Nuevo León	Frisa	EAF	x 1	400	plan	2019	Platts
NAFTA	Mexico	Chihuahua	Industrias CH	EAF	x 1	600	underway	2017	World Steel Capacities
NAFTA	Mexico	Pesqueria, Nuevo Leon	Ternium Mexico	EAF	x 2	3000	plan	n/a	Metal Bulletin
NAFTA	United States	Montpelier, Iowa	SSAB North American Division	EAF	x 1	1200	plan	n/a	Metal Expert
NAFTA	United States	Louisiana	Benteler Steel/Tube	EAF	x 1	n/a	plan	2018	World Steel Capacities
Oceania	Australia	Queensland	Euroa Steel Plant Project (formerly Boulder Steel)	BOF	n/a	2500	plan	n/a	Gladstone Observer
Other Europe	Turkey	Orhangazi, Bursa	Asil Celik	EAF	x 1	500	plan	n/a	Metal Expert
Other Europe	Turkey	Izmir	Habas	EAF	x 1	1500	plan	2017	Metal Expert
Other Europe	Turkey	n/a	Platinum Demir Celik	IF	x 2	100	plan	2017	Metal Expert
Other Europe	Turkey	Canakkale, Biga	Icdas	BOF	n/a	2000	cancellation	2018	Metal Expert
Other Europe	Turkey	Filyos, Zonguldak	Kardemir	BOF	n/a	6000	cancellation	n/a	Platts
Other Europe	Turkey	Osmaniye	Yolbulan Bastug	EAF	x 1	2000	cancellation	n/a	Platts
Other Europe	Turkey	Payas, Hatay	Corbus Celik	EAF	n/a	500	postponement	n/a	Platts

Source: Media sources listed in the table.

ANNEX 2: AVAILABLE EVIDENCE OF PLANT-LEVEL CLOSURES IN 2016[8]

Table 4. Closure data based on media sources

Permanent closures, 2016 ("Others" refers to a closure other than permanent, e.g. idling of a plant)

REGION	ECONOMIES	LOCATION	COMPANY	EQUIPMENT	NUMBER OF EQUIPMENT	DETAIL	TYPE OF CLOSURE	CAPACITY	SOURCES
Asia	China	Hefei	Hefei Iron & Steel Company	BOF	x 2	90 t	Others (unidentified)	1360	Metal Expert
Asia	China	Henan	Nanyang Dingxin Steel	EAF	x 2	90 t	Others (unidentified)	800	Metal Expert
Asia	China	Nanjing	Baosteel	EAF	x 2	50 t	Others (unidentified)	n/a	Company HP
Asia	China	Nanjing	Baosteel	EAF	x 1	100 t	Others (unidentified)	n/a	Company HP
Asia	China	Shaoguan	Guangdong Shaoguan Iron and Steel company ltd.	EAF	x 1	90 t	Others (unidentified)	n/a	Company HP
Asia	China	Shaoguan	Shaoguan Hongfeng Special Steel	EAF	x 1	15 t	Permanent	250	Kallanish
Asia	China	Shaoguan	Shaoguan Hongfeng Special Steel	IF	x 3	6 t	Permanent	n/a	Kallanish
Asia	China	Shaoguan	Shaoguan Qujiang Xinyi Mental Products Co.Ltd	IF	x 1	15 t	Permanent	100	Kallanish
Asia	China	Shaoguan	Shaoguan Qujiang Shengyuan Metal Products Co.Ltd	IF	x 1	15 t	Permanent	100	Kallanish
Asia	China	Shaoguan	Shaoguan Qujiang Hongda Technology Company	IF	x 1	15 t	Permanent	100	Kallanish
Asia	China	Shaoguan	Shaoguan Qujiang Hongfeng Industrial Company	IF	x 3	20 t	Permanent	300	Kallanish
Asia	China	Liannan Yao	Qingyuan Liannan Yao antonomous Country	IF	x 2	n/a	Permanent	20	Kallanish
Asia	China	Liannan Yao	Qingyuan Liannan Yao antonomous Hongtai Mental Products Co.Ltd	IF	x 4	12 t	Permanent	300	Kallanish
Asia	China	Liannan Yao	Qingyuan Liannan Yao autonomous Yongda Metal Products Co.Ltd	IF	x 4	12 t	Permanent	300	Kallanish
Asia	China	Shaoguan	Shaoguan Renhua Guangsheng Trade Co.Ltd	IF	x 2	12 t	Permanent	300	Kallanish
Asia	China	Shaoguan	Shaoguan Renhua Guangsheng Trade Co.Ltd	IF	x 2	8 t	Permanent	n/a	Kallanish
Asia	China	Shaoguan	Shaoguan Renhua Guangsheng Trade Co.Ltd	IF	x 2	6 t	Permanent	n/a	Kallanish
Asia	China	Shaoguan	Shaoguan Renhua Mindong Mental Product Co.Ltd	IF	x 2	8 t	Permanent	100	Kallanish
Asia	China	Shaoguan	Shaoguan Ruyuan Yao autonomous county Shangdong Metal Products	IF	x 3	10 t	Permanent	180	Kallanish
Asia	China	Shaoguan	Shaoguan Ruyuan Yao autonomous county Sanbao Lasi Co.Ltd	IF	x 6	12 t	Permanent	400	Kallanish
Asia	China	Shaoguan	Shaoguan Ruyuan Yao autonomous county Xinpeng Specia Steel	IF	x 4	8 t	Permanent	200	Kallanish
Asia	China	Dongyuan, Heyuan	Heyuan Dongyuan Yuanshun Iron & Steel	EAF	x 2	50 t	Permanent	420	Kallanish
Asia	China	Anshan	Anshan Baode Iron & Steel	Steelmkg	x 2	45 t	Permanent	1600	Kallanish
Asia	China	Chaoyang	Chaoyang Mingxin Ductile Co. Ltd	Steelmkg	x 1	30 t	Permanent	500	Kallanish
Asia	China	Jilin	Tonghua Iron & Steel (Tonggang)	EAF	x 1	70 t	Permanent	600	Platts
Asia	China	Jilin	Changlong Iron & Steel	EAF	x 2	30 t	Permanent	480	Platts
Asia	China	Gansu	Yuzhong Iron & Steel	Steelmkg	n/a	n/a	Others (unidentified)	1400	Platts
Asia	China	Gansu	Dachangxin Metals	Steelmkg	n/a	n/a	Others (unidentified)	40	Platts
Asia	China	Zhejiang	n/a	Steelmkg	n/a	n/a	Others (unidentified)	3003	Platts
Asia	China	Hunan provinces	n/a	Steelmkg	n/a	n/a	Others (unidentified)	500	Platts
Asia	Malaysia	Selangor	Megasteel	EAF	x 2	n/a	Others (unidentified)	3200	Metal Expert
Europe	France	Thionville	Akers	EAF	x 1	n/a	Permanent	80	Steel Committee
Europe	Spain	Biscay	ArcelorMittal Sestao	EAF	x 1	n/a	Others (unidentified)	1800	Metal Expert
Europe	Spain	Zumarraga	ArcelorMittal Spain	EAF	x 1	n/a	Others (unidentified)	750	Metal Expert
Latin America	Brazil	Minas Garais	Vallourec	Steelmkg	x 1	n/a	Permanent	n/a	Platts

Source: Media sources listed in the table

ANNEX 3: WORKING DEFINITIONS USED

Steelmaking capacity

The OECD Secretariat employs a definition of nominal crude steelmaking capacity based on maximum theoretical equipment capacity.[9] This definition does not take into account yield losses, maintenance and other factors affecting the productivity of installed steelmaking equipment. Therefore, steelmaking capacity figures provided by the OECD should not be regarded as effective capacity.

Capacity is defined in volume (tonnes) and annual capacity data figures reflect all existing steelmaking capacity at the end of a calendar year.

Steelmaking equipment

The OECD Secretariat considers as steelmaking equipment any equipment used to produce crude steel. The definition excludes iron-making equipment considered here as upstream, as well as casting, rolling or finishing equipment considered here as downstream. More specifically, the following equipment types are considered as crude steelmaking:

Type	Code
Electric arc furnace	EAF
Energy Optimising Furnace	EOF
Induction furnace	IF
LD Basic Oxygen furnace	BOF
Open hearth furnace	OHF
Steelmaking - not specified	STEELMKG

Assessing capacity developments

The three databases described in this paper are used to assess capacity developments. Changes in capacity are derived by taking into account new capacity additions and permanent closures in a given economy. In order to assess potential gross capacity additions in the future, investment projects are classified as “underway” or “planned”. A project classified as “underway” is one which is under construction or for which contracts for equipment have been awarded and a major financial or state commitment has been made. “Planned” projects are more uncertain because they are either at the feasibility or early planning stage, yet to receive financial or state backing, or not scheduled for completion at a specified time. The classification of projects and comments on their progress do not in any way represent a judgement or imply a view on the advisability or feasibility of the projects.

Because closures cannot be forecast, the tables in this document provide only potential gross capacity additions and do not provide projections of net changes in capacity. It should be noted that planned or underway investments are sometimes altered due to changes in market conditions. Postponements refer to projects that were put on hold for a definite or indefinite period, while cancellations are previously announced projects that will no longer be implemented.

Steelmaking capacity closures

The OECD Secretariat distinguishes between "permanent" and "temporary" steelmaking capacity closures. Permanent closures of capacity are considered to involve dismantling and scrapping of the equipment used for producing crude steel, or otherwise rendering such equipment permanently unusable for manufacturing crude steel. Temporary closures entail measures other than permanent closures as defined above, whereby production can be resumed in the future. Temporary closures include, for example, the idling of a plant's furnace. Only permanent closures are used for the purpose of calculating existing capacity.

NOTES

[1] See *L'Industrie sidérugique en 1965 et tendances en 1966*, OECD, Paris 1966

[2] See *Developments in Steelmaking Capacity of Non-OECD Economies (DOI: http://dx.doi.org/10.1787/steel_non-oecd-2013-en-fr).*

[3] Information provided in the database on plants' ownership should be viewed with caution because the data sources used typically do not provide a definition of public versus private ownership.

[4] Only permanent closures are used in calculations of existing capacity. See Annex 2 for additional details.

[5] Note that for some countries the figures may differ from official figures due in part to less comprehensive information on closures.

[6] See a recent Report on the Work of the Government delivered by Premier of the State Council Li Keqiang on 5 March 2017: http://online.wsj.com/public/resources/documents/NPC2017_WorkReport_English.pdf

[7] See for example State Council document 2016/6, "Opinions on Resolving Overcapacity and Realizing Development out of Difficulties for the Iron and Steel Industry", available at: http://www.gov.cn/zhengce/content/2016-02/04/content_5039353.htm

[8] The closure information collected in this table is based on plant-level data obtained from public and commercial sources, but does not represent an exhaustive list of closures. Aggregate closure information provided by delegations to the Secretariat is reflected in the capacity tables shown earlier in this document.

[9] This definition is also commonly referred to as nominal, rated or nameplate capacity.